

<110> Jager, Dirk
Scanlan, Matthew
Gure, Ali
Jager, Elke
Knuth, Alexander
Old, Lloyd
Chen, Yao-tseng

<120> Isolated Nucleic Acid Molecules Encoding Cancer Associated Antigens,
the Antigens per se, and Uses Thereof

<130> LUD 5615

<140> 09/451,739

<141> 1999-11-30

<160> 19

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<213> Homo sapiens
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<223> unknown
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<211> 1143

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<213> Homo sapiens

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aagcccaaca	gcaagcgcctc	acggcggcag	cgcacaacgc	agaaccgtga	gaacgcgtcc	480
agcaaccacg	accacgaacg	cggcgcctcg	ggcacaccca	aggagaagaa	ggccaagacc	540
tccaagaaga	agaagcgcctc	caaggccacg	gcggagcgag	aggcgtcccc	tggcgcctc	600
ccatcgacc	ccaacgaacc	ccctactgt	ctglgcaacc	aggtctccta	tggggagatg	660
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<211> 857

<212> DNA

<213> Homo sapiens

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ctttgtctcc	aagcggcttc	aaactgagta	cggggagacg	acacaaagg	agggcggtga	180
cggatggcgc	agggcgggga	gcgccttagg	ctgctgggag	tggtagtcg	gcccgggaat	240
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ggtggacagc cactgggagc tgttcgagcc gcagcaggag ctgggcgaca cagcggggca 480
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<210> 5

<211> 279

<212> PRT

<213> Homo sapiens

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20                25                30
Asn Val Ser Leu Met Arg Glu Ile Asp Ala Lys Tyr Gln Glu Ile Leu
35                40                45
Lys Glu Leu Asp Glu Cys Tyr Glu Arg Phe Ser Arg Glu Thr Asp Gly
50                55                60
Ala Gln Lys Arg Arg Met Leu His Cys Val Gln Arg Ala Leu Ile Arg
65                70                75                80
Ser Gln Glu Leu Gly Asp Glu Lys Ile Gln Ile Val Ser Gln Met Val
85                90                95
Glu Leu Val Glu Asn Arg Thr Arg Gln Val Asp Ser His Val Glu Leu
100               105               110
Phe Glu Ala Gln Gln Glu Leu Gly Asp Thr Val Gly Asn Ser Gly Lys
115               120               125
Val Gly Ala Asp Arg Pro Asn Gly Asp Ala Val Ala Gln Ser Asp Lys
130               135               140
Pro Asn Ser Lys Arg Ser Arg Arg Gln Arg Asn Asn Glu Asn Arg Glu
145               150               155               160
Asn Ala Ser Ser Asn His Asp His Asp Asp Gly Ala Ser Gly Thr Pro
165               170               175
Lys Glu Lys Lys Ala Lys Thr Ser Lys Lys Lys Lys Arg Ser Lys Ala
180               185               190
Lys Ala Glu Arg Glu Ala Ser Pro Ala Asp Leu Pro Ile Asp Pro Asn
195               200               205
Glu Pro Thr Tyr Cys Leu Cys Asn Gln Val Ser Tyr Gly Glu Met Ile
210               215               220
Gly Cys Asp Asn Asp Glu Cys Pro Ile Glu Trp Phe His Phe Ser Cys
225               230               235               240
Val Gly Leu Asn His Lys Pro Lys Gly Lys Trp Tyr Cys Pro Lys Cys
245               250               255
Arg Gly Glu Asn Glu Lys Thr Met Asp Lys Ala Leu Glu Lys Ser Lys
260               265               270
Lys Glu Arg Ala Tyr Asn Arg
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<210> 6

<211> 210

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<212> PRT

<213> Homo sapiens

<220>

<400> 6

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20     25     30
Arg Thr Arg Gln Val Asp Ser His Val Glu Leu Phe Glu Ala Gln Gln
35     40     45
Glu Leu Gly Asp Thr Val Gly Asn Ser Gly Lys Val Gly Ala Asp Arg
50     55     60
Pro Asn Gly Asp Ala Val Ala Gln Ser Asp Lys Pro Asn Ser Lys Arg
65     70     75     80
Ser Arg Arg Gln Arg Asn Asn Glu Asn Arg Glu Asn Ala Ser Ser Asn
85     90     95
His Asp His Asp Asp Gly Ala Ser Gly Thr Pro Lys Glu Lys Lys Ala
100    105    110
Lys Thr Ser Lys Lys Lys Lys Arg Ser Lys Ala Lys Ala Glu Arg Glu
115    120    125
Ala Ser Pro Ala Asp Leu Pro Ile Asp Pro Asn Glu Pro Thr Tyr Cys
130    135    140
Leu Cys Asn Gln Val Ser Tyr Gly Glu Met Ile Gly Cys Asp Asn Asp
145    150    155    160
Glu Cys Pro Ile Glu Trp Phe His Phe Ser Cys Val Gly Leu Asn His
165    170    175
Lys Pro Lys Gly Lys Trp Tyr Cys Pro Lys Cys Arg Gly Glu Asn Glu
180    185    190
Lys Thr Met Asp Lys Ala Leu Glu Lys Ser Lys Lys Glu Arg Ala Tyr
195    200    205
Asn Arg
210

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<210> 7

<211> 235

<212> PRT

<213> Homo sapiens

<400> 7

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Met Glu Ile Leu Lys Glu Leu Asp Glu Cys Tyr Glu Arg Phe Ser Arg
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20     25     30
Ala Leu Ile Arg Ser Gln Glu Leu Gly Asp Glu Lys Ile Gln Ile Val
35     40     45
Ser Gln Met Val Glu Leu Val Glu Asn Arg Thr Arg Gln Val Asp Ser
50     55     60
His Val Glu Leu Phe Glu Ala Gln Gln Glu Leu Gly Asp Thr Val Gly
65     70     75     80
Asn Ser Gly Lys Val Gly Ala Asp Arg Pro Asn Gly Asp Ala Val Ala
85     90     95
Gln Ser Asp Lys Pro Asn Ser Lys Arg Ser Arg Arg Gln Arg Asn Asn
100    105    110
Glu Asn Arg Glu Asn Ala Ser Ser Asn His Asp His Asp Asp Gly Ala
115    120    125
Ser Gly Thr Pro Lys Glu Lys Lys Ala Lys Thr Ser Lys Lys Lys Lys
130    135    140

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Arg Ser Lys Ala Lys Ala Glu Arg Glu Ala Ser Pro Ala Asp Leu Pro
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 Ile Asp Pro Asn Glu Pro Thr Tyr Cys Leu Cys Asn Gln Val Ser Tyr
 165 170 175
 Gly Glu Met Ile Gly Cys Asp Asn Asp Glu Cys Pro Ile Glu Trp Phe
 180 185 190
 His Phe Ser Cys Val Gly Leu Asn His Lys Pro Lys Gly Lys Trp Tyr
 195 200 205
 Cys Pro Lys Cys Arg Gly Glu Asn Glu Lys Thr Met Asp Lys Ala Leu
 210 215 220
 Glu Lys Ser Lys Lys Glu Arg Ala Tyr Asn Arg
 225 230 235

<210> 8
 <211> 772
 <212> DNA
 <213> Homo sapiens
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 <222> 689,714
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 agcagggctc catggccaag gcctagcggc aggcgtcccc cgcagacctc cccatcgacc 180
 ccagcagacc cctctactgq gagatgatcc gctgcgacca cgaatgcccc atcgagtggc 240
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 gccggggaaa gaacgatggg caaagccctt gagaagtcca gaaaaaaac agggcttata 360
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 attcgggagg ctgaggcagg agaattggnt gaacctggga ggtggagctt gcantgagcc 720
 aaggtgcgcg cactgcactc cagcctgggc gacagagcga gactccatct ta 772

<210> 9
 <211> 32
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 <213> Homo sapiens
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32

<210> 10
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23

<210> 11
 <211> 21
 <212> DNA

<213> Homo sapiens
 <400> 11
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21

<210> 12
 <211> 23
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 <213> Homo sapiens
 <400> 12
 cgtggctcgtg gttgctggac ggc

23

<210> 13
 <211> 23
 <212> DNA
 <213> Homo sapiens
 <400> 13
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23

<210> 14
 <211> 23
 <212> DNA
 <213> Homo sapiens
 <400> 14
 cgtggctcgtg gttgctggac ggc

23

<210> 15
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 <222> 1628, 1752, 1758, 1769, 1789, 1873, 1908, 1915, 1933, 1970, 1976, 2022
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ccacactgaa acaccaatad caggaaaaagg aaaaataaata ctttgaggac attaaagattt 1260
taaaagaaaa gaattgctga cttcagatga ccctaaaact gaaagaggaa tcatttaacta 1320
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<210> 16

<211> 512

<212> PRT

<213> Homo sapiens

<400> 16

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20          25          30
Ile Glu Met Gln Lys Ser Val Pro Asn Lys Ala Leu Glu Leu Lys Asn
35          40          45
Glu Gln Thr Leu Arg Ala Asp Glu Ile Leu Pro Ser Glu Ser Lys Gln
50          55          60
Lys Asp Tyr Glu Glu Ser Ser Trp Asp Ser Glu Ser Leu Cys Glu Thr
65          70          75          80
Val Ser Gln Lys Asp Val Cys Leu Pro Lys Ala Thr His Gln Lys Glu
85          90          95
Ile Asp Lys Ile Asn Gly Lys Leu Glu Glu Ser Pro Asp Asn Asp Gly
100         105         110
Phe Leu Lys Ala Pro Cys Arg Met Lys Val Ser Ile Pro Thr Lys Ala
115         120         125
Leu Glu Leu Met Asp Met Gln Thr Phe Lys Ala Glu Pro Pro Glu Lys
130         135         140
Pro Ser Ala Phe Glu Pro Ala Ile Glu Met Gln Lys Ser Val Pro Asn
145         150         155         160
Lys Ala Leu Glu Leu Lys Asn Glu Gln Thr Leu Arg Ala Asp Gln Met
165         170         175
Phe Pro Ser Glu Ser Lys Gln Lys Lys Val Glu Glu Asn Ser Trp Asp
180         185         190
Ser Glu Ser Leu Arg Glu Thr Val Ser Gln Lys Asp Val Cys Val Pro
195         200         205
Lys Ala Thr His Gln Lys Glu Met Asp Lys Ile Ser Gly Lys Leu Glu
210         215         220
Asp Ser Thr Ser Leu Ser Lys Ile Leu Asp Thr Val His Ser Cys Glu
225         230         235         240
Arg Ala Arg Glu Leu Gln Lys Asp His Cys Glu Gln Arg Thr Gly Lys
245         250         255
Met Glu Gln Met Lys Lys Lys Phe Cys Val Leu Lys Lys Lys Leu Ser
260         265         270

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Glu Ala Lys Glu Ile Lys Ser Gln Leu Glu Asn Gln Lys Val Lys Trp
 275 280 285
 Glu Gln Glu Leu Cys Ser Val Arg Leu Thr Leu Asn Gln Glu Glu Glu
 290 295 300
 Lys Arg Arg Asn Ala Asp Ile Leu Asn Glu Lys Ile Arg Glu Glu Leu
 305 310 315 320
 Gly Arg Ile Glu Glu Gln His Arg Lys Glu Leu Glu Val Lys Gln Gln
 325 330 335
 Leu Glu Gln Ala Leu Arg Ile Gln Asp Ile Glu Leu Lys Ser Val Glu
 340 345 350
 Ser Asn Leu Asn Gln Val Ser His Thr His Glu Asn Glu Asn Tyr Leu
 355 360 365
 Leu His Glu Asn Cys Met Leu Lys Lys Glu Ile Ala Met Leu Lys Leu
 370 375 380
 Glu Ile Ala Thr Leu Lys His Gln Tyr Gln Glu Lys Glu Asn Lys Tyr
 385 390 395 400
 Phe Glu Asp Ile Lys Ile Leu Lys Glu Lys Asn Ala Glu Leu Gln Met
 405 410 415
 Thr Leu Lys Leu Lys Glu Glu Ser Leu Thr Lys Arg Ala Ser Gln Tyr
 420 425 430
 Ser Gly Gln Leu Lys Val Leu Ile Ala Glu Asn Thr Met Leu Thr Ser
 435 440 445
 Lys Leu Lys Glu Lys Gln Asp Lys Glu Ile Leu Glu Ala Glu Ile Glu
 450 455 460
 Ser His His Pro Arg Leu Ala Ser Ala Val Gln Asp His Asp Gln Ile
 465 470 475 480
 Val Thr Ser Arg Lys Ser Gln Glu Pro Ala Phe His Ile Ala Gly Asp
 485 490 495
 Ala Cys Leu Gln Arg Lys Met Asn Val Asp Val Ser Ser Thr Asp Ile
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<210> 17
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<210> 18
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<210> 19
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 <213> Homo sapiens
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 1 5 10 15
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 20 25 30


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Pro Arg Pro Ala Gly Pro Ala Arg Arg Gln Phe Gln Ala Ala Ser Leu
    35          40          45
Leu Thr Arg Gly Trp Gly Arg Ala Trp Pro Trp Lys Gln Ile Leu Lys
    50          55          60
Glu Leu Asp Glu Cys Tyr Glu Arg Phe Ser Arg Glu Thr Asp Gly Ala
    65          70          75          80
Gln Lys Arg Arg Met Leu His Cys Val Gln Arg Ala Leu Ile Arg Ser
    85          90          95
Gln Glu Leu Gly Asp Glu Lys Ile Gln Ile Val Ser Gln Met Val Glu
    100          105          110
Leu Val Glu Asn Arg Thr Arg Gln Val Asp Ser His Val Glu Leu Phe
    115          120          125
Glu Ala Gln Gln Glu Leu Gly Asp Thr Val Gly Asn Ser Gly Lys Val
    130          135          140
Gly Ala Asp Arg Pro Asn Gly Asp Ala Val Ala Gln Ser Asp Lys Pro
    145          150          155          160
Asn Ser Lys Arg Ser Arg Arg Gln Arg Asn Asn Glu Asn Arg Glu Asn
    165          170          175
Ala Ser Ser Asn His Asp His Asp Asp Gly Ala Ser Gly Thr Pro Lys
    180          185          190
Glu Lys Lys Ala Lys Thr Ser Lys Lys Lys Arg Ser Lys Ala Lys
    195          200          205
Ala Glu Arg Glu Ala Ser Pro Ala Asp Leu Pro Ile Asp Pro Asn Glu
    210          215          220
Pro Thr Tyr Cys Leu Cys Asn Gln Val Ser Tyr Gly Glu Met Ile Gly
    225          230          235          240
Cys Asp Asn Asp Glu Cys Pro Ile Glu Trp Phe His Phe Ser Cys Val
    245          250          255
Gly Leu Asn His Lys Pro Lys Gly Lys Trp Tyr Cys Pro Lys Cys Arg
    260          265          270
Gly Glu Asn Glu Lys Thr Met Asp Lys Ala Leu Glu Lys Ser Lys Lys
    275          280          285
Glu Arg Ala Tyr Asn Arg
    290

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